

Remarks/Arguments

Applicants respectfully request reconsideration of this application in view of the following remarks. Claims 1, 3, 26, 38 and 41 are amended. As a result, upon entry of the amendment claims 1-9, 11, 12, 14-24 and 26-43 are pending, with claims 1, 2, 16, 31 and 38 being independent claims. Because two independent claims are added, the requisite fee of \$440.00 for the addition of two independent claims in excess of three independent claims is included herewith. It is believed that no additional fees are due for the consideration of this paper. However, if fees are due, the Commissioner is authorized to charge such fees to deposit account number 13-2855.

Claim Amendments

It is respectfully submitted that the claims as amended above are supported by the application as originally filed in the Patent Office on September 30, 2003, that the amended claims satisfy the written description requirement and the other requirements of 35 U.S.C. § 112, and that no new matter is being added. Claim 1 is amended to more clearly recite that the first control unit does not use the first and second transmission paths to detect the fault condition in the communication bus. The amendments to claim 1 are supported by the application as originally filed at least at Fig. 4 and the accompanying text wherein the first control unit 80 does not use the first and second transmission paths 25, 27 to detect the fault condition, and instead uses, for example, the third pair of wires 29 to detect a fault condition on the communication bus. Claims 3 and 38 are rewritten in independent from including all of the limitations of claim 1 from which the claims previously depended. Claim 26 is amended to reflect the previous cancellation of claim 25, and to now depend from claim 24 through which the elements of claim 26 find proper antecedent basis. Finally, claim 41 is amended to correct an obvious typographical error by deleting “couple” and inserting “coupled” therefore to make the claim grammatically correct.

Applicants respectfully submit that the amendments to claims 1, 3, 26, 38 and 41 do not present new matter and do not raise new issues, and respectfully request entry of the present amendments and consideration of the claims as amended.

Claim Objections

Claim 26 is amended to depend from claim 24 which provides proper antecedent basis for the elements recited in claim 26. Claim 41 is amended to substitute “coupled” for

“couple” in line 7 to correct an obvious typographical error. Reconsideration and withdrawal of the objections is respectfully requested.

Claim Rejections under 35 U.S.C. § 103(a)

Applicants respectfully traverse the rejections of each of claims 1, 2, 39 and 40 as obvious over U.S. Pat. No. 6,594,603 (“Eryurek et al.”) in view of U.S. Pat. Nos. 6,912,671 (“Christensen et al.”) and 6,385,166 (Takagi et al.). Reconsideration and withdrawal of the rejections is respectfully requested in view of the amendment to claim 1 and the following remarks.

In addition to the failure of the references to teach the limitations of claim 1 as detailed in the previous response, Applicants respectfully submit that the references fail to teach detecting a fault condition in a communication bus without detecting the fault condition on the transmission paths used for communications between the ends of the communications bus as recited in claim 1 as amended. The Eryurek et al. patent does not disclose or suggest detecting fault conditions on the process control loop 8 at all, let alone detecting the fault conditions somewhere other than on the two wires of the control loop 8. In addition to failing to teach the interruption of the flow of electrical signals **in response to detecting** a fault condition as discussed previously, the Christensen et al. patent teaches fault detection unit 128 detecting faults on the bus 30 based on signals transmitted on the two wires of the bus 30. No disclosure is provided of detecting faults using elements other than the two wires of the bus 30 that are used for communications. Finally, the Takagi et al. patent also teaches detecting fault conditions via the communication lines 40, 41 of the bus 22, which the final Office action identifies as corresponding to the first and second transmission lines recited in the claims. No other connections are shown between the communication bus groups 23, 24 of the bus 22 and the control circuit 34 identified as corresponding to the control unit of claim 1. Consequently, any fault detection on the bus 22 necessarily uses the communication lines 40, 41 in contrast to the first control unit of claim 1 that does not use the first and second communication paths. Because none of the references of the proposed combination teaches detection of fault conditions in a communication bus that does not use first and second communication paths of the bus, it follows that this limitation of claim 1 is wholly missing from the proposed combination and the combination fails to establish a *prima facie* case of obviousness. For at least these reasons, withdrawal of the rejection of claims 1, 2, 39 and 40 is respectfully requested

CONCLUSION

Entry and consideration of the foregoing amendments as improving the form of the application are solicited. The amendments have the effect of narrowing the issues for consideration by Examiner Hoang, or on appeal, and were not earlier presented because, prior to the final Office action and Examiner Hoang's comments therewith, these amendments were not felt necessary to obtain allowance.

For at least the foregoing reasons, reconsideration and withdrawal of the rejection of the claims and allowance of the currently pending claims are respectfully requested. Should the Examiner wish to discuss the foregoing or any matter of form in an effort to advance this application towards allowance, she is urged to telephone the undersigned at the indicated number.

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Respectfully submitted,

/Scott E. Baxendale/

Scott E. Baxendale
Reg. No: 41,605

MARSHALL, GERSTEIN & BORUN LLP
6300 Sears Tower
233 South Wacker Drive
Chicago, Illinois 60606-6402
(312) 474-6300
Attorney for Applicants